

CLAIMS

What is claimed is:

1           1.     A method of storing and retrieving information, comprising:  
2           storing a first communication as data in a database, the storing  
3           utilizing software configured to save an identifier code associated with the first  
4           communication data in the database;  
5           associating at least a portion of the first communication together with  
6           the identifier code on a substrate;  
7           changing the first communication on the substrate to form a second  
8           communication which is different from the first communication;  
9           scanning the second communication and the identifier code with a  
10          scanning machine to digitize the second communication and the identifier code;  
11          extracting information from the digitized identifier code with a  
12          processor, the processor being in data communication with the database and  
13          being configured to utilize the extracted information to retrieve the first  
14          communication from the database; and  
15          comparing the digitized second communication with the data of the  
16          first communication to identify differences between the second communication  
17          and the first communication.

1           2.     The method of claim 1 wherein the changing the first  
2           communication on the substrate comprises at least one of removing a portion of  
3           the substrate having a portion of the first communication thereon, and forming  
4           marks over at least a portion of the first communication on the substrate.

1           3.     The method of claim 1 further comprising:  
2           electronically forming a third communication comprising the  
3           differences between the first communication and the second communication;  
4           and  
5           sending the third communication to an output device to display the  
6           differences between the first communication and the second communication.

1           4.     The method of claim 1 further comprising:  
2                 electronically merging at least a portion of the data of the first  
3     communication with at least a portion of the digitized second communication to  
4     form a digitized third communication; and  
5                 sending the digitized third communication to an output device to  
6     display the third communication.

1           5.     The method of claim 1 wherein the scanner utilized in the  
2     scanning machine comprises a digitizing device configured to be held within a  
3     human hand, and wherein the processor is comprised by a machine separate  
4     from the digitizing device, the method further comprising sending the digitized  
5     second document from the digitizing device to the processor.

1           6.     The method of claim 1 wherein the identifier code is hidden on  
2     the substrate, the hidden identifier code being formed on the substrate by  
3     printing the code in the form of either a pattern camouflaged within a pattern of  
4     the first communication or an ink invisible to humans when viewed under light  
5     having only visible wavelengths.

1           7.     A method of document retrieval, comprising:  
2                 providing a database having multiple versions of a document stored  
3     therein as data sets, the multiple versions having a common document specific  
4     code associated therewith in the database and having different version specific  
5     codes;  
6                 forming a hard copy of one of the versions of the document, the hard  
7     copy version being defined as a first version of the document, the hard copy  
8     having the common document specific code provided thereon in machine-  
9     readable format and having the version specific code provided thereon in  
10    machine-readable format;  
11                reading the machine-readable format with a code-reading machine

configured to extract the document specific code and version specific code from the machine-readable format;

providing the document specific code and version specific code extracted by the machine to a processor in data communication with the database, the processor being configured to extract at least a portion of a second version of the document from a data set corresponding to the second version of the document, wherein the second version is different than the first version.

8. The method of claim 7 further comprising utilizing the processor to generate a difference document which shows the differences between the first and second versions of the document.

9. The method of claim 7 wherein the at least one of the document specific code or version specific code specifies a finishing operation for the hard copy of the document; said finishing operation comprising one or more of stapling, binding, glueing, duplex printing and forming a cover page.

10. The method of claim 7 further comprising:  
sending a prompt from the processor to a user when the processor detects that multiple versions of the document are stored in the database; and  
providing input from the user to the processor to indicate which of the multiple versions of the document is to have at least a portion extracted from the database.

11. The method of claim 7 wherein:  
the documents comprise multiple sub-components which can be independently updated;  
the multiple sub-components have different component-identifying codes stored on the database to identify the sub-components and the versions of the sub-components;

7 the hard copy has some component-identifying codes provided  
8 thereon in machine-readable code which identify the sub-components displayed  
9 on the hard copy and the versions of such displayed sub-components;

10 the machine-readable code of the component-identifying codes on the  
11 hard copy is read by the code-reading machine;

12 the processor is configured to determine if different versions of any of  
13 the sub-components displayed on the hard copy are in the database; and

14 the extracted portion of the document corresponds to at least one  
15 sub-component.

1 12. The method of claim 11 further comprising:

2 sending a prompt from the processor to a user when the processor  
3 detects that multiple versions of one or more sub-components are stored in the  
4 database; and

5 providing input from the user to the processor to indicate which of the  
6 multiple versions of the of the one or more sub-components is to be extracted  
7 from the database.

1 13. A method of storing and retrieving information, comprising:

2 storing multiple versions of a communication in a database, the storing  
3 multiple versions comprising:

4 creating a first version of the communication;

5 saving the first version of the communication to the  
6 database as a first data set, the saving utilizing software  
7 configured to save a first identifier code in the database  
8 associated with the first version of the communication;

9 fetching the first version of the communication from the  
10 database and changing at least a portion of the first version of  
11 the communication to form a second version of the  
12 communication; and

13 saving the second version of the communication to the

14 database as a second data set, the saving utilizing software  
15 configured to save a second identifier code in the database  
16 associated with the second version of the communication;  
17 publishing at least a portion of the first version of the communication  
18 together with the first identifier code; and  
19 retrieving a selected one of the first and second versions of the  
20 communication from the database, the retrieving the selected one of the  
21 versions comprising:  
22 providing the published first identifier code to a  
23 processor having data communication with the database, the  
24 processor being configured to utilize the first and second  
25 identifier codes to retrieve and compare the first and second  
26 data sets, the processor being further configured to recognize  
27 that multiple versions of the communication were saved to the  
28 database as multiple data sets and to prompt a user to select  
29 which of the multiple versions is to be displayed; and  
30 utilizing the processor to send at least a portion of a  
31 selected one of the first and second data sets to an output  
32 device and to thereby display at least a portion of the selected  
33 one of the multiple versions of the communication stored on  
34 the database.

1 14. The method of claim 13 wherein the first communication  
2 comprises a plurality of sub-components, wherein the second communication  
3 comprises a plurality of sub-components, and wherein the sub-components  
4 correspond to one or more of graphics, text or finishing processes for the first  
5 and second communications, the method further comprising:  
6 utilizing the software to save first sub-component identifier codes  
7 which identify at least some of the sub-components within the first  
8 communication data set; and  
9 utilizing the software to save second sub-component identifier codes

10 which identify at least some of the sub-components within the second  
11 communication data set.

1 15. The method of claim 13 wherein the first communication  
2 comprises a plurality of sub-components, and wherein the second  
3 communication comprises a plurality of sub-components, at least one of the sub-  
4 components of the second communication being different than the sub-  
5 components of the first communication, the method further comprising:  
6 utilizing the software to save first sub-component identifier codes  
7 which identify at least some of the sub-components within the first  
8 communication data set;  
9 utilizing the software to save second sub-component identifier codes  
10 which identify at least some of the sub-components within the second  
11 communication data set;  
12 the processor being configured to utilize the first and second sub-  
13 component identifier codes to retrieve and compare sub-components of the first  
14 and second communication data sets, and to identify the at least one sub-  
15 component of the second communication that is different from the sub-  
16 components of the first communication, the prompting the user indicating which  
17 of the sub-components of the second communication sub-components are  
18 different than the first communication sub-components; and  
19 the displaying at least a portion of one of the first and second data  
20 sets comprising displaying the sub-component of the second communication  
21 that is different from the sub-components of the first communication.

1 16. The method of claim 13 wherein the providing the published  
2 first identifier code to a processor comprises one or more of voice input to the  
3 processor, tactile input to the processor, or scanned machine-readable code  
4 input to the processor.

1 17. The method of claim 13 further comprising:

2 utilizing the processor to generate a difference document from the  
3 selected communication, the difference document showing the differences  
4 between the first and second communications; and  
5 the displaying at least a portion of the selected one of the two  
6 versions of the communication comprising displaying the difference document.

1 18. The method of claim 13 wherein the sending the portion of the  
2 selected one of the first and second communications to an output device  
3 comprises sending said selected portion to e-mail, a web page or a printed hard  
4 copy.

1 19. The method of claim 13 wherein:  
2 the first and second communications comprise multiple sub-  
3 components which can be independently updated;  
4 the multiple sub-components have different component-identifying  
5 codes stored on the database to identify the sub-components and the versions  
6 of the sub-components;  
7 the published first communication having some component-identifying  
8 codes provided thereon which identify the sub-components displayed on the  
9 published first communication and the versions of such displayed sub-  
10 components;  
11 the published component-identifying codes of the published first  
12 communication being provided to the processor together with the published first  
13 identifier code; and  
14 the processor being configured to detect if multiple versions of one or  
15 more sub-components are stored in the database.

1 20. The method of claim 19 further comprising:  
2 the prompt from the processor to the user indicating if the processor  
3 detects that multiple versions of one or more sub-components are stored in the  
4 database; and

- 5 the input from the user to the processor indicating which of the  
6 multiple versions of the of the one or more sub-components is to be displayed  
7 with the selected communication.

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